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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jukka Suonvieri

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11/17/2006

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EXAMINER

CHO, UN C

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,331

Applicant(s)

SUONVIERI, JUKKA

Examiner

Un C. Cho

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21,22,25,26,28-33,35 and 37-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21,22,25,26,28-33,35 and 37-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 21, 22, 25, 26, 28, 29, 31, 33, 35 and 38 – 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Chater-Lea (US 5,822,314).

Regarding claim 21, Chater-Lea discloses a method for detecting network elements relaying communications between a base station and a mobile station in a mobile communication network (see Abstract), said method comprising: monitoring time delays associated with communications between base stations and mobile stations (timing offset is calculated in a communication between a first and a second communication unit; Chater-Lea: Col. 2, lines 3 – 20);

calculating a timing advance which corresponds to time delays associated with communications between the base stations and the mobile stations (calculates any timing offset required to be implemented by one of the communication unit; Chater-Lea: Col. 2, lines 21 – 26 and Col. 5, lines 13 – 23); determining whether a communication was relayed via at least one of the network elements by detecting an increased time delay as compared to a known time delay of mobile stations communicating directly with the base stations (communication between first and second mobile communication is relayed through a relay, whereas the relay adds delay to the communication between the first and second communication device, thus producing a timing offset; Chater-Lea: Col. 2, lines 15 – 20 and Col. 2 line 52 through Col. 3, line 10); and sending an event notice to a network management system, when a presence of at least one of the network elements is initially detected; wherein a determination is made that the communication is relayed via at least one of the network element if the timing advance has a value which is greater than a predetermined value (one of the communication device (MS) sends a timing signal to the other communication device (BS, whereas the network management system includes the BS), whereas the other device receives the timing signal and checks to see if there is a timing offset, thus, if it is true (in order to determine would be to compare to a known value or a predetermined threshold) it knows that the communication has been relayed through a relay device; Chater-Lea: Col. 6, line 36 through Col. 7, line 16).

Regarding claim 22, Chater-Lea discloses identifying the communication relaying elements based on the communication time delays (Chater-Lea: Col. 2, lines 15 – 20).

Regarding claim 25, Chater-Lea discloses wherein the predetermined value is zero (BS checks the received frame number, if the expected frame number equals the received frame number then there is no difference or the difference is zero; Chater-Lea: Col. 7, lines 2 – 4).

Regarding claim 26, Chater-Lea discloses wherein the mobile communication network is a GSM network (Chater-Lea: Col. 1, lines 30 – 34).

Regarding claim 28, Chater-Lea discloses wherein the time delays are monitored by a base transceiver station (Chater-Lea: Col. 5, lines 20 – 23).

Regarding claim 29, Chater-Lea discloses wherein the time delays are monitored by a base station controller (base station is inherently connected to a base station controller or it is built-in within the base station and Chater-Lea discloses that BS calculates timing offset; Chater-Lea: Col. 5, lines 20 – 23).

Regarding claim 31, Chater-Lea discloses wherein at least one of said network elements is a radio repeater (Chater-Lea: Col. 3, lines 33 – 43).

Regarding claims 33 and 38, the claims are interpreted and rejected for the same reason as set forth in claim 21.

Regarding claim 35, the claim is interpreted and rejected for the same reason as set forth in claim 26.

Regarding claim 39, the claim is interpreted and rejected for the same reason as set forth in claim 28.

Regarding claim 40, the claim is interpreted and rejected for the same reason as set forth in claim 29.

Regarding claim 41, Chater-Lea discloses wherein the steps of determining whether a communication was relayed via at least one of the network element is performed without requiring any additional monitoring equipment to be located in the network element performing the relaying and without requiring any additional signaling to be generated by the network element performing the relaying (Chater-Lea: Col. 2, lines 15 – 20).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chater-Lea in view of Prithviraj et al. (US 5,987,513).

Regarding claim 30, Chater-Lea as applied above does not specifically disclose monitoring the communication the communication relayed via at least one of the network elements to determine various parameters which provide information with respect to network functionality and the network elements. In an

analogous art, Prithviraj remedies the deficiencies of Chater-Lea by disclosing such limitations in Col. 7, line 66 through Col. 8, line 67 and Col. 10, lines 3 – 6. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Prithviraj to the system of Chater-Lea in order to provide an efficient way of monitoring network elements to know of a significant events, which may have occurred around the time a problem has precipitated in the network.

Regarding claim 37, the claim is interpreted and rejected for the same reason as set forth in claim 30.

5. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chater-Lea in view of Bassirat (US 6,507,741 B1).

Regarding claim 32, Chater-Lea as applied above does not specifically disclose wherein at least one of said network element is an optical tunneling configuration. In an analogous art, Bassirat remedies the deficiency of Chater-Lea by disclosing such limitation in Col. 7, lines 51 – 56. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Bassirat to the system of Chater-Lea in order to provide an efficient and useful system and method that improves hand-off performance from cell to cell or from cell to another cell that uses different technology.

Response to Arguments

6. Applicant's arguments filed on 9/1/2006 have been fully considered but they are not persuasive.

Regarding claim 21, the applicant presented the argument that the prior art provided by the examiner fails to teach the claimed invention. The examiner respectfully disagrees with the argument presented by the applicant. Chater-Lea clearly discloses all the limitations such as monitoring time delays associated with communications between base stations and mobile stations (timing offset is calculated in a communication between a first and a second communication unit; Chater-Lea: Col. 2, lines 3 – 20); calculating a timing advance which corresponds to time delays associated with communications between the base station and the mobile stations (calculates any timing offset required to be implemented by one of the communication unit; Chater-Lea: Col. 5, lines 13 – 23); determining whether a communication was relayed via at least one of the network elements by detecting an increased time delay as compared to a known time delay of mobile stations communicating directly with the base stations (communication between first and second mobile communication is relayed through a relay, whereas the relay adds delay to the communication between the first and second communication device, thus producing a timing offset; Chater-Lea: Col. 2, lines 15 – 20 and Col. 2 line 52 through Col. 3, line 10); and sending an event notice to a network management system, when a presence of at least one of the network elements is initially detected; wherein a determination is made that the

communication is relayed via at least one of the network elements if the timing advance has a value which is greater than a predetermined value (one of the communication device (MS) sends a timing signal to the other communication device (BS, whereas the network management system includes the BS), whereas the other device receives the timing signal and checks to see if there is a timing offset, thus, if it is true (in order to determine would be to compare to a known value or a predetermined threshold) it knows that the communication has been relayed through a relay device; Chater-Lea: Col. 6, line 36 through Col. 7, line 16).

Therefore, the office action mailed on 5/12/2006 stands.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2617

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C. Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Un C Cho
Examiner
Art Unit 2617

11/7/06 *ue*


GEORGE ENG
SUPERVISORY PATENT EXAMINER